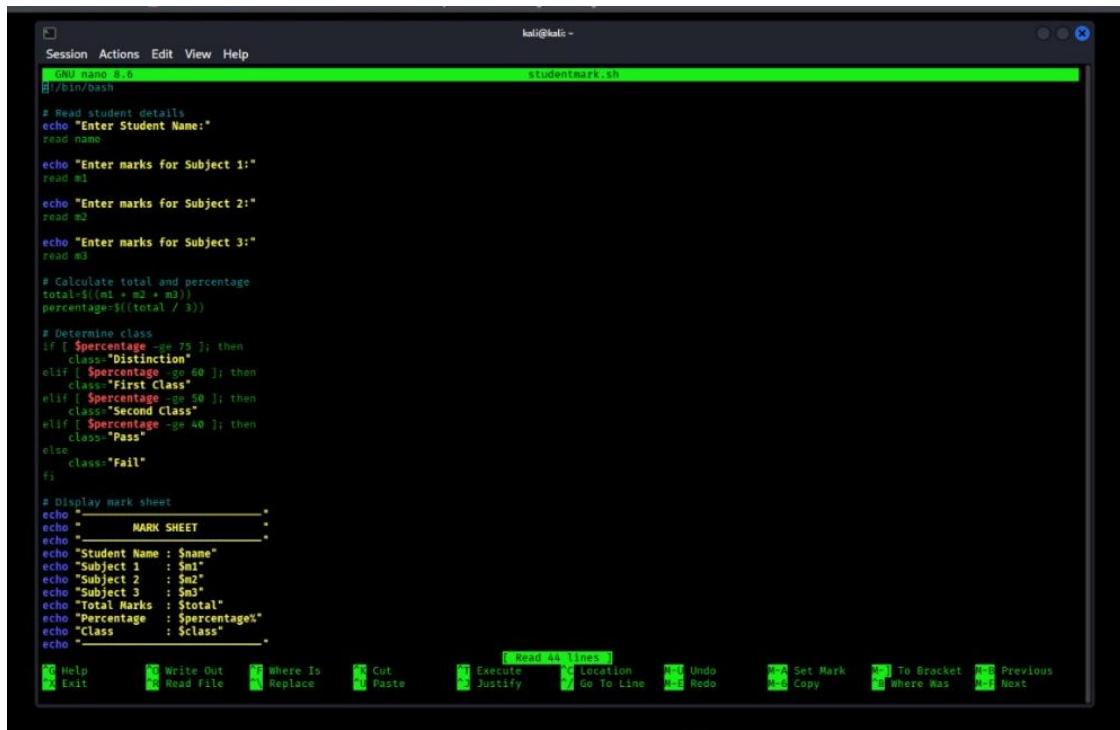


1. Write a shell script to generate mark- sheet of a student. Take 3 subjects, calculate and display total marks, percentage and class obtained by the student.



```
Session Actions Edit View Help
GNU nano 8.0
studentmark.sh
#!/bin/bash

# Read student details
echo "Enter Student Name:"
read name

echo "Enter marks for Subject 1:"
read m1

echo "Enter marks for Subject 2:"
read m2

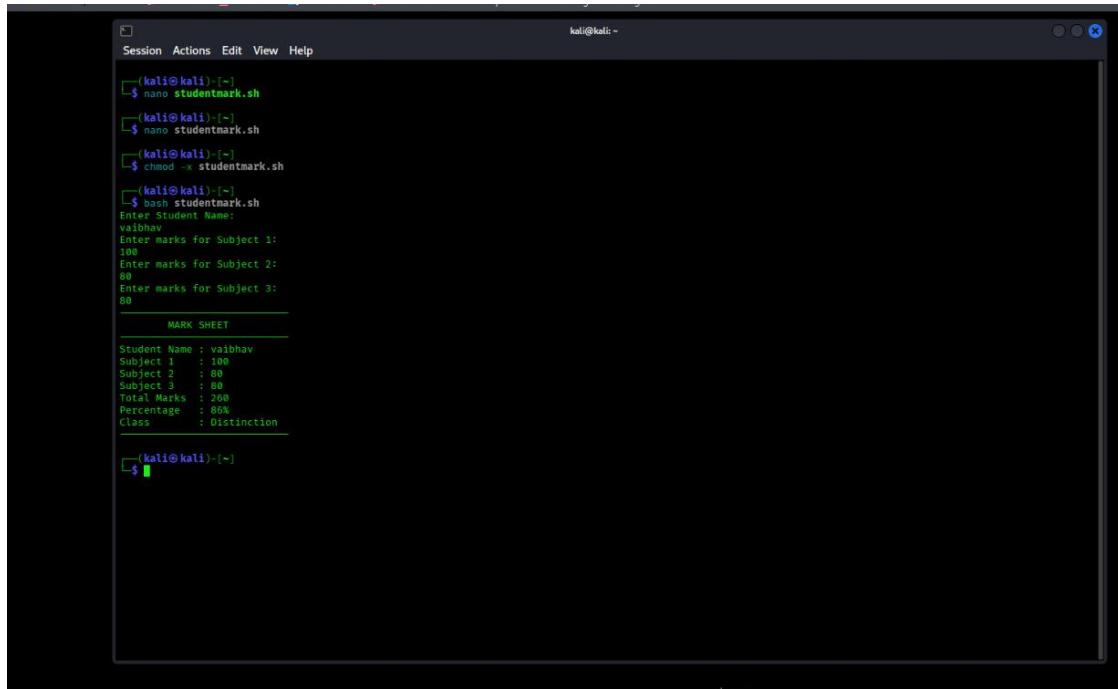
echo "Enter marks for Subject 3:"
read m3

# Calculate total and percentage
total=$((m1 + m2 + m3))
percentage=$((total / 3))

# Determine class
if [ $percentage -ge 75 ]; then
    class="Distinction"
elif [ $percentage -ge 60 ]; then
    class="First Class"
elif [ $percentage -ge 50 ]; then
    class="Second Class"
elif [ $percentage -ge 40 ]; then
    class="Pass"
else
    class="Fail"
fi

# Display mark sheet
echo "-----"
echo "      MARK SHEET"
echo "-----"
echo "Student Name : $name"
echo "Subject 1 : $m1"
echo "Subject 2 : $m2"
echo "Subject 3 : $m3"
echo "Total Marks : $total"
echo "Percentage : $percentage"
echo "Class : $class"
echo "-----"

[ Help   Write Out  Where Is  Cut  Paste  Execute  Location  Undo  Set Mark  To Bracket  Previous
  Exit   Read File  Replace  Copy  Justify  Go To Line  Redo  Copy  To Where Was  Next ]
```



```
(kali㉿kali)-[~]
$ nano studentmark.sh
(kali㉿kali)-[~]
$ nano studentmark.sh
(kali㉿kali)-[~]
$ chmod +x studentmark.sh
(kali㉿kali)-[~]
$ bash studentmark.sh
Enter student Name:
vaibhav
Enter marks for Subject 1:
100
Enter marks for Subject 2:
80
Enter marks for Subject 3:
80
-----
      MARK SHEET
-----
Student Name : vaibhav
Subject 1 : 100
Subject 2 : 80
Subject 3 : 80
Total Marks : 260
Percentage : 86%
Class : Distinction

(kali㉿kali)-[~]
$
```

2. Write a menu driven shell script which will print the following menu and execute the given task. .

- Display calendar of current month
- Display today's date and time
- Display user names those are currently logged in the system
- Display Your terminal number

```
Session Actions Edit View Help
(kali㉿kali)-[~]
$ chmod +x menu.sh
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
1
Calendar of Current Month:
January 2026
Su Mo Tu We Th Fr Sa
      1  2  3
4  5  6  7  8  9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
2
Today's Date and Time:
Mon Jan 19 09:42:37 AM EST 2026
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
3
Users currently logged in:
kali    seat0    2026-01-19 09:08 (:0)
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
4
Your Terminal Number:
/dev/pts/0
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
5
Exiting program...
_____
(kali㉿kali)-[~]
```

image

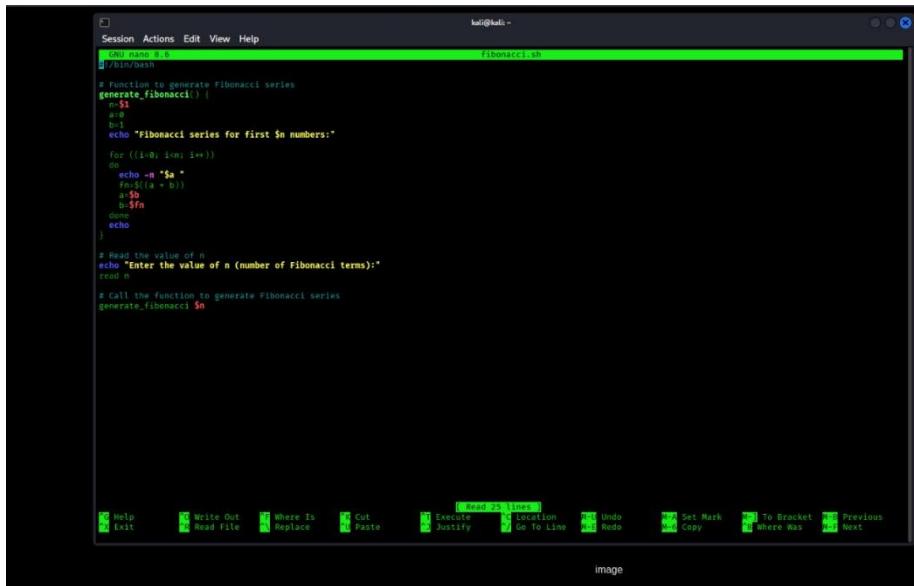
```
Session Actions Edit View Help
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
2
Today's Date and Time:
Mon Jan 19 09:42:37 AM EST 2026
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
3
Users currently logged in:
kali    seat0    2026-01-19 09:08 (:0)
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
4
Your Terminal Number:
/dev/pts/0
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
5
Exiting program...
_____
(kali㉿kali)-[~]
```

image

```
Session Actions Edit View Help
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
3
Users currently logged in:
kali    seat0    2026-01-19 09:08 (:0)
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
4
Your Terminal Number:
/dev/pts/0
_____
(kali㉿kali)-[~]
$ bash menu.sh
_____
MENU PROGRAM
_____
1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit
_____
Enter your choice:
5
Exiting program...
_____
(kali㉿kali)-[~]
```

image

3 .Write a shell script which will generate first n Fibonacci numbers like: I, L,2, 3, 5, 13



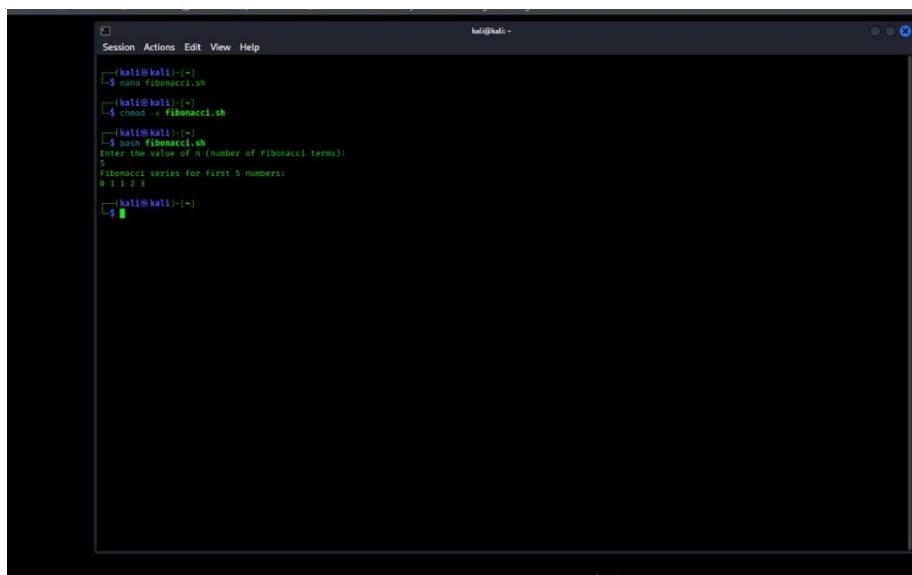
```
Session Actions Edit View Help
GNU nano 3.6
fibonacci.sh

# Function to generate Fibonacci series
generate_fibonacci() {
    a=0
    b=1
    echo "Fibonacci series for first $1 numbers:"
    for ((i=0; i<1; i++))
    do
        echo -n '$a '
        fib=$((a + b))
        a=$b
        b=$fib
    done
    echo
}

# Read the value of n
echo "Enter the value of n (number of Fibonacci terms):"
read n

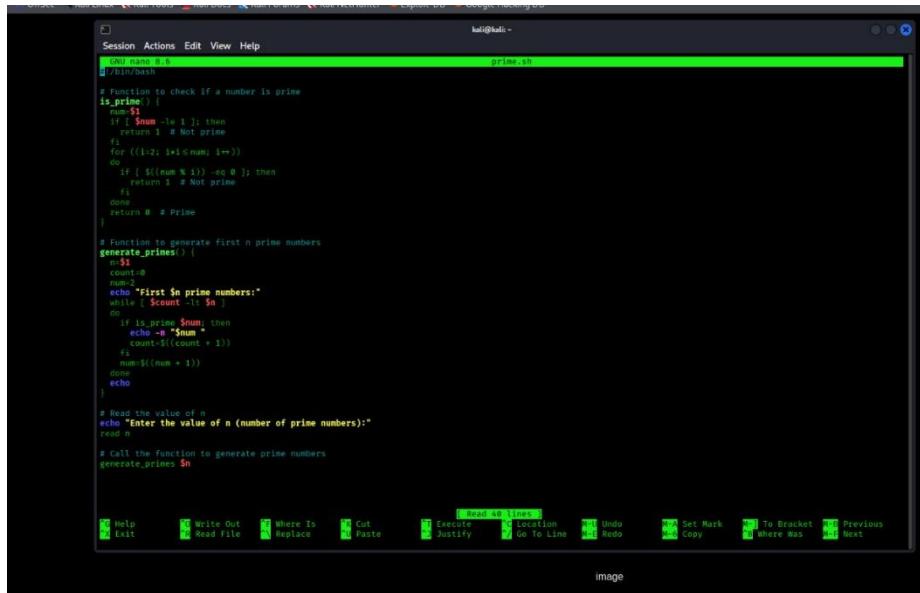
# Call the function to generate Fibonacci series
generate_fibonacci $n

[Read 25 lines]
```



```
Session Actions Edit View Help
(kali㉿kali)-[~]
└─$ nano fibonacci.sh
(kali㉿kali)-[~]
└─$ chmod +x fibonacci.sh
(kali㉿kali)-[~]
└─$ ./fibonacci.sh
Enter the value of n (number of Fibonacci terms):
5
Fibonacci series for first 5 numbers:
0 1 1 2 3
(kali㉿kali)-[~]
└─$
```

4. Write a shell script which will accept a number b and display first n prime numbers as output.



```
Session Actions Edit View Help
kali㉿kali: ~
prime.sh
#!/bin/bash

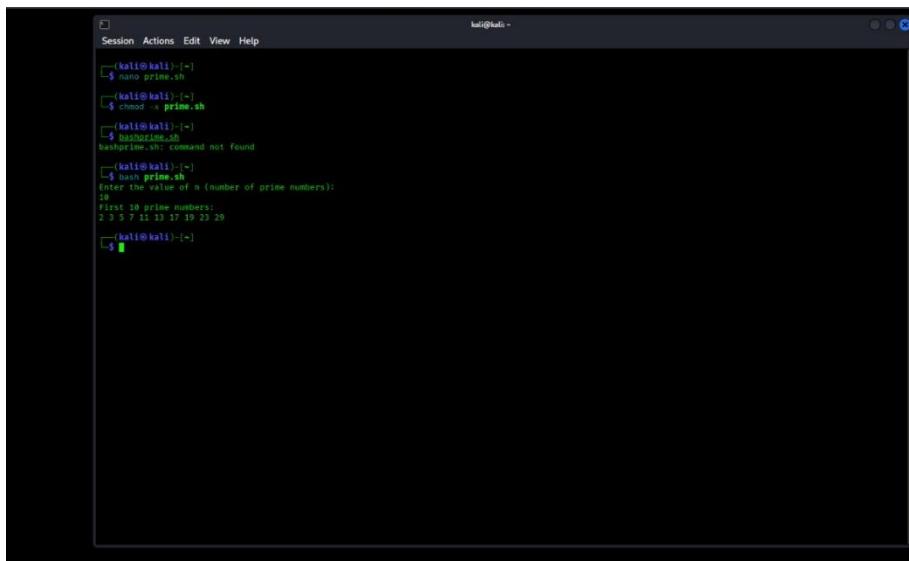
# Function to check if a number is prime
is_prime() {
    num=$1
    if [ $num -le 1 ]; then
        return 1 # Not prime
    fi
    for ((i=2; i<=num; i++))
    do
        if [ $((num % i)) -eq 0 ]; then
            return 1 # Not prime
        fi
    done
    return 0 # Prime
}

# Function to generate first n prime numbers
generate_primes() {
    s=0
    count=0
    num=2
    echo "First $n prime numbers:"
    while [ $count -lt $n ]
    do
        if is_prime $num; then
            echo -n $num
            count=$((count + 1))
        fi
        num=$((num + 1))
    done
    echo
}

# Read the value of n
echo "Enter the value of n (number of prime numbers):"
read n

# Call the function to generate prime numbers
generate_primes $n
```

image



```
(kali㉿kali)-[~]
└─$ nano prime.sh
(kali㉿kali)-[~]
└─$ chmod +x prime.sh
(kali㉿kali)-[~]
└─$ ./prime.sh
bash: ./prime.sh: command not found
(kali㉿kali)-[~]
└─$ ./prime.sh
Enter the value of n (number of prime numbers):
10
First 10 prime numbers:
2 3 5 7 11 13 17 19 23 29
(kali㉿kali)-[~]
└─$
```

5. Write menu driven program for file handling activity

- Creation of file
- Write content in the file
- Upend file content
- Delete file content

```
# Function to create a file
create_file() {
    echo "Enter the filename to create:"
    read filename
    touch "$filename"
    echo "File '$filename' created successfully."
}

# Function to write content to the file
write_content() {
    echo "Enter the filename to write content:"
    read filename
    if [ ! -f "$filename" ]
    then
        echo "File does not exist. Creating File..."
        touch "$filename"
    fi
    echo "Enter content to write (Ctrl+D to end input):"
    cat > "$filename"
    echo "Content written to '$filename'."
}

# Function to append content to the file
append_content() {
    echo "Enter the filename to append content:"
    read filename
    if [ ! -f "$filename" ]
    then
        echo "File does not exist. Creating File..."
        touch "$filename"
    fi
    echo "Enter content to append (Ctrl+D to end input):"
    cat > "$filename"
    echo "Content appended to '$filename'."
}

# Function to delete file content
delete_content() {
    echo "Enter the filename to delete content:"
    read filename
    if [ ! -f "$filename" ]
    then
        echo "File does not exist."
        exit
    fi
    rm "$filename"
}
```

image

```
Session Actions Edit View Help
halil@kali: ~
$ nano file1.sh
(kali㉿kali) ~
$ bash file1.sh
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
1
Enter the filename to create:
valihav
File 'valihav' created successfully.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
2
Enter the filename to write content:
valihav
Enter content to write (Ctrl+D to end input):
Hello Valihav Content written to 'valihav'.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
3
Enter the filename to append content:
valihav
Enter content to append (Ctrl+D to end input):
Hello Tisang
Content appended to 'valihav'.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
4
Enter the filename to delete content:
valihav
Content of 'valihav' deleted.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
5
Exiting program...
(kali㉿kali) ~
```

image

```
Session Actions Edit View Help
halil@kali: ~
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
2
Enter the filename to write content:
valihav
Enter content to write (Ctrl+D to end input):
Hello Valihav Content written to 'valihav'.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
3
Enter the filename to append content:
valihav
Enter content to append (Ctrl+D to end input):
Hello Tisang
Content appended to 'valihav'.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
4
Enter the filename to delete content:
valihav
Content of 'valihav' deleted.
_____
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice:
5
Exiting program...
(kali㉿kali) ~
```

image